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ABSTRACT

This study describes a program designed to increase academic achievement in reading and writing among first and second grade students in a rural, middle-income area. Evidence for the existence of the problem includes reading comprehension tests, observation checklists for reading skills and reading behaviors, and writing samples. Analysis of probable cause data suggests inadequate achievement in reading and writing can be broken down into three categories: educational issues, family issues, and mass media use. A review of the solution strategies suggested by the professional literature, combined with an analysis of the settings of the problem, resulted in the selection of a three-pronged problem-solving approach incorporating lessons built on cooperative learning and multiple intelligences combined with cross-age tutoring to increase academic achievement in reading and writing. Based on the presentation and analysis of the data on improving achievement in reading and writing, the students showed a marked improvement in these areas. Cooperative learning aided the students in being successful through peer interaction. Since students learn in a variety of ways, the multiple intelligences lessons catered to the students' ways of learning. Cross-age tutoring played a key role in improving the students' reading and writing skills. The second grade students took on the teacher role when assisting the first graders in various lessons. Self-esteem improved in both grade levels and they looked forward to working together. As a result of cooperative learning, multiple intelligences, and cross-age tutoring, the students' academic achievement in reading and writing improved in all areas. Contains 23 references, and a table and 12 figures of data. Appendixes contain writing samples, checklists, evaluation measures, and lesson plans. (Author/RS)

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IMPROVING ACADEMIC ACHIEVEMENT IN READING AND WRITING IN PRIMARY GRADES

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An Action Research Project Submitted to the Graduate Faculty of the

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ABSTRACT

This study describes a program designed to increase academic achievement in reading and writing among first and second grade students. The school district consists of two communities in a rural area. The economic status of both communities is middle income. Evidence for the existence of the problem includes reading comprehension tests, observation checklists for reading skills and reading behaviors, and writing samples.

Analysis of probable cause data suggests inadequate achievement in reading and writing can be broken down into three categories. The educational issues category focuses on how lower-economic status students are at a disadvantage. Teachers also can alter teaching strategies and use various techniques as well spend more time on reading and writing. The family issues center around how much a parent reads to his/her child as well as modeling reading and writing themselves. The amount and quality of television, the Internet, video games, and music, can effect a child's learning. Since there are many negative aspects of media, students need to learn how it can be helpful.

A review of the solution strategies suggested by the professional literature, combined with an analysis of the settings of the problem, resulted in the selection of a three-pronged problem-solving approach incorporating lessons built on cooperative learning and multiple intelligences combined with cross-age tutoring to increase academic achievement in reading and writing.

Based on the presentation and analysis of the data on improving achievement in reading and writing, the students showed a marked improvement in these areas. Cooperative learning aided the students in being successful through peer interaction. Since students learn in a variety of ways, the multiple intelligences lessons catered to the students' ways of learning. Cross-age tutoring played a key role in improving the students' reading and writing skills. The first and second grade students worked very well together. There were few times the teacher had to step in and offer assistance. The second grade students took on the teacher role when assisting the first graders in various lessons. Self-esteem improved in both grade levels and they looked forward to working together. As a result of cooperative learning, multiple intelligences, and cross-age tutoring, the students' academic achievement in reading and writing improved in all areas.

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CHAPTER 1

IMPROVING STUDENTS' ACADEMIC ACHIEVEMENT IN READING AND WRITING IN PRIMARY GRADES

General Statement of the Problem

The students of the targeted first and second grade classes display negative attitudes toward and exhibit inadequate achievement in reading and writing. Evidence of the problem includes teacher observation, worksheets, journals, oral reading, and tests.

Immediate Problem Context

The school district is formed by two small communities. They will be referred to as Town A and Town B. Two of the schools can be found in Town A. The first school is a primary and junior high. It educates pre-kindergarten through third, and also seventh and eighth grades. The second school is the high school that includes ninth through twelfth grades. Town B has the middle school that consists of fourth, fifth, and sixth grades. There are 976 students in the district. The ethnic backgrounds of these students are as follows: 97.6% white, 0.6% black, 0.2% Hispanic, 1.3% Asian/Pacific Islander, and 0.2% Native Americans. The low income students make up 12.2% of the population, while the remaining 87.8% have average to high income status. The attendance rate for the district is 95.6%. The chronic truancy rate is 0.7%.

There is one superintendent in the district and one principal per school. There are 66 teachers with 19.6% being males and 80.4% being females. The ethnic background of these teachers is 100% white. The average teaching experience is 12.3 years. The percentage of teachers with a bachelors degree is 82.1%; only 17.9% of the teachers have post-baccalaureate degrees. The teachers' average salary is $29,963 based on a full-time status. The administrator's salary is $60,517. The school district is governed by seven Board of Education members.

The targeted group of students attend the combined primary, and junior high school located in Town A. The grades within this building are Pre-K through 3 and 7-8. In 1997 there were 430 students enrolled in this school. The ethnic background of the students consist of 97.4% white, 0.7% black, 0.5% Asian/Pacific Islander, 0.2% Native American. In this school, 13.0% are from low income families, and there is 1.2% chronic truancy rate in this school.

The 55 faculty and staff of the school include: one principal, one secretary, 21 teachers, six aides, three special education teachers, two speech teachers, two Reading Recovery teachers, two physical education teachers, one band teacher, one music teacher, one counselor, one librarian, one computer teacher, five special education coordinators, four cooks, and three custodians. There are five male employees and 51 female employees. The ethnic background of the staff is 100% white.

The basic subjects taught in this school are reading, math, social studies, science, and language arts. The students also have computer and library class twice a week for 30 minutes. Music and physical education are classes that the students attend daily for 15 minutes. Some of

the teachers in the primary grades use whole language, some use basal, and many teachers use a combination of both to teach their students. The junior high teachers also use basal or a combination of basal and whole language. The average minutes of reading and language arts per day is 60 minutes. The above information was gathered from the 1997 School Report Card.

The Surrounding Communities

The history of Town A began in 1827. Settlers found Town A to be desirable because of the nearness to the river and land suitable for agriculture. People traveled by carriages and trains. The railroad station was the first building built in Town A. There were many businesses consisting of a hotel, cheese factory, opera house, furniture company, several mills, blacksmith shop and livery stable, dry goods store, ice business, hardware store, and a newspaper. Abraham Lincoln was often a guest of the hotel. The first county jail was built in Town A. The occupations of the people included: plumbers, tradesmen, carpenters, lawyers, bankers, doctors, and pharmacists.

The town has changed as times have changed. A village board consisting of one president and six trustees as well as a township government consisting of a township supervisor and four trustees, governs the community. The public is welcome to attend their monthly meetings. There is a subdivision located outside of town. The subdivision has grown, with a population of 1700, in the past couple of years. The following data is according to the 1990 US Census. There are 2,758 people in community A with 1,430 being male and 1,328 being female. The ethnic background of this town is 97% white. The annual income per family is $31,987. Occupations include traveling to factories or businesses, or farming. The town is

served by five churches representing a variety of Christian denominations. Within the community, there are several businesses. These privately owned businesses include: a grocery store, post office, library, ice cream parlor, restaurant, hair styling salon, and three gas stations. There is a police department and a volunteer fire department.

Town B is located in a rural area with a population of 2231 residents. Many of the people are farmers whose families have lived in this town for generations while others have factory or office jobs in the surrounding communities. The ethnic background mostly consists of white families. The median household income is $36,536. The town consists of a library, autobody shop, post office, restaurant, two gas stations, hair styling shop, and two churches. The middle school for the district is located in Town B. This town is surrounded by corn and bean fields on every side. There are larger communities just miles away for residents to shop, work, and enjoy entertainment.

National Context of the Problem

Based on the amount of research about children's reading and writing, there seems to be a major concern for this problem across the nation. As Hart & Risley and Juel stated, the process of becoming literate begins early in life and children's early experiences affect school readiness and later school success (Dickinson & DiGisi 1998). Early in life, children need to be read to as well as given the chance to explore books on their own. Parents set good examples by showing their love of reading and writing throughout their daily lives. There are many ways parents can get their children enthusiastic about books such as: reading to their children, purchasing books for them, visiting the library, setting time aside each day for reading, and modeling reading themselves. If a youngster does not learn to read in our literacy - driven

society, hope for a fulfilling, productive life diminishes (Lyon, 1998). Many educational researchers have different ideas for improving reading and writing many of which go beyond the traditional classroom approach of teaching reading and writing to children.

There is controversy over which strategy is the best in teaching reading and writing in the classroom. To set the stage for students to succeed at reading, teachers can supply ample time for text reading, direct strategy instruction, and opportunities for collaboration and discussion (Fielding & Pearson 1998). According to Shanahan & Lomax and Tierney & Shanahan, reading and writing are closely linked processes and participation in strong writing programs benefits children's reading and writing development (Dickinson & DiGisi 1998).

Today's educators are seeking to provide a comprehensive and balanced instructional program that is engaging and rich with meaning, yet grounded in curricular expectations that are visible to teachers, parents, and students (Strickland 1998). In essence, teachers need to be aware of the many different strategies for implementing reading and writing in their classrooms and select those most appropriate for their particular settings.

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

In order to document the extent of inadequate achievement in reading and writing of the 19 first grade students and the 20 second grade students, the following methods were used to collect data over a two week period: writing samples, reading comprehension test, teacher checklist of reading skills, and teacher checklist of reading behaviors were administered and evaluated over a two week period of time.

Both first and second grade classes were given a writing sample appropriate for their grade level (see samples in Appendicies A&B). The students turned their writing samples into the teacher when they felt that it was complete. The writing samples were evaluated by the teachers based on six criteria (see criteria for writing samples in Appendicies C&D). Each criteria was evaluated individually and given a *yes* if it was met and a *no* it if was not. Each *yes* was worth one point and each *no* was worth zero points. Since there are six criteria, there was a possible total of six points. The students were assessed and placed into one of three categories based on the number of points: 6 to 5 points was very good, 4 to 3 points was fair and 2 or fewer points was poor. The percentages for each category were calculated for first and second grades and are presented in Table 1 and Figure 1.

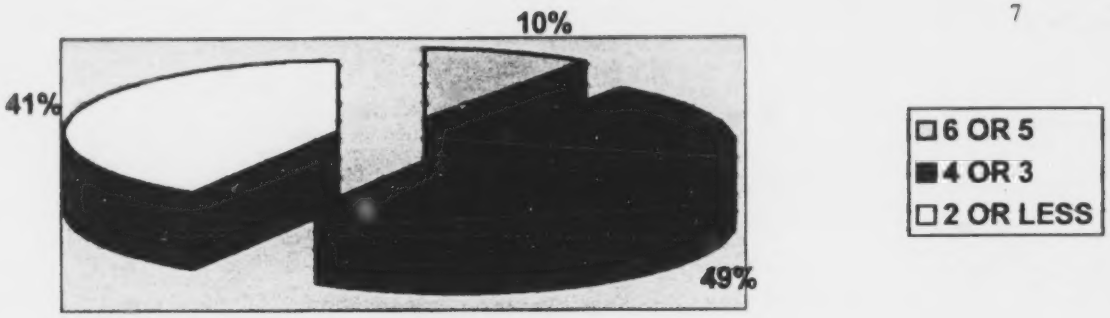

Figure 1

Percentage of first and second grade students with high to low average writing abilities based on a writing sample.

Table 1

Number of students in each score category of writing samples for the targeted first and second grade students.

Score	6 or 5	4 or 3	2 or less
Number of second grade students	2	10	8
Number of first grade students	2	9	8
N = 39	10%	49%	41%

It can be inferred from the results of the writing samples that 90 percent of the first and second grade students need to improve their writing skills. Only 10 percent of the students exhibit adequate achievement in writing.

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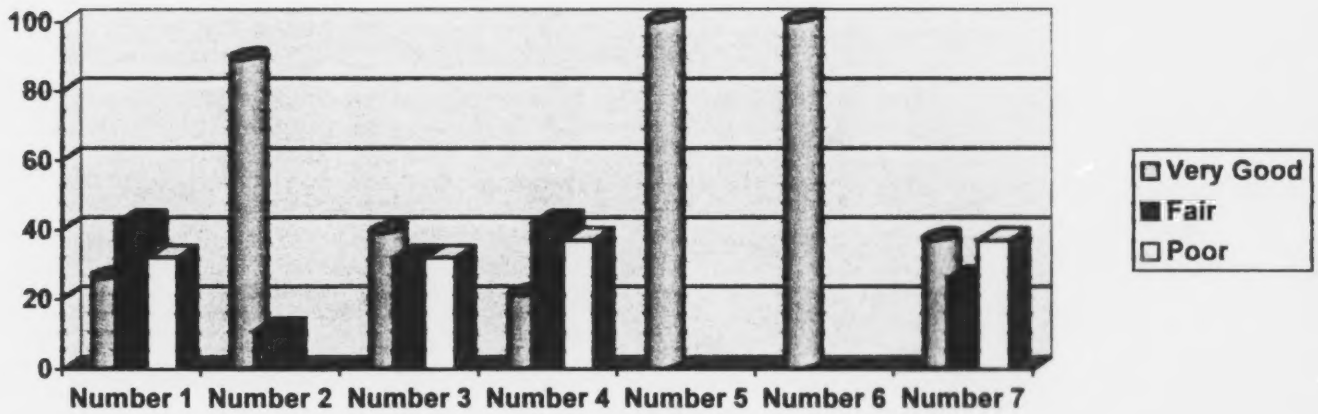
The 19 first grade students were evaluated for two weeks based on seven criteria on the Teacher Checklist of Reading Skills (see sample in Appendix E). The criteria were divided and scored into three categories: very good, fair and poor. The first criterion tested how well the students knew upper and lower case letters. The students were asked to write the upper and lower case letters as the teacher named them one by one. There were no visuals in the classroom that could help the students and they could not see their neighbors' answers. The teacher scored their papers based on the three categories as follows: 100 to 90 percent was very good, 89 to 70 percent was fair and 69 percent and below was poor. The students' scores were then tallied and the percentage of students in each category was calculated. The second criterion was administered to the students at the same time, when they were asked to write the letter of the sound the teacher said aloud. They could not see others' answers. Again, the test was graded and based on the following scale: 100 to 90 percent was very good, 89 to 70 were fair, and 69 percent or below was poor. The total scored was then tallied under the categories and a group percentage for each category was given. The third criterion was based on listening and teacher observation. The teacher evaluated the students individually to see if they sounded out the sight words as they read. If the student attempted to sound out every word, very good was given, if the student sounded out few, fair was given and if the student didn't attempt to sound out the word at all, poor were given. The students' scores were tallied together under each category and a percentage was given. The fourth criterion was tested and evaluated at the same time the sight words were sounded out because the teacher wanted to find out how many sight words each student knew. There were 144 sight words on the test and each student was asked to read them individually

(see sample in Appendix G). The test was scored as follows: recognizing 144 to 130 sight words was very good, 129 to 115 sight words was fair and 114 or below was poor. The students' scores were tallied under each category and a group percentage was calculated. The fifth criterion was administered individually to each student: they were asked to read a simple sentence. If the student read the sentence accurately, very good was scored. If the student struggled, but succeeded, fair was given. If the student missed a word, poor was given. Each student's score was tallied under the correct category, and a group percentage was given. The sixth criterion was based on comprehending the simple sentence that was read for criterion number five. The student had to accurately explain the meaning of the sentence to receive very good, otherwise, they were given fair if they partially understood, and poor if they could not make sense of it. The scores were tallied under the categories and a percentage was calculated. The last criterion on the teacher checklist was administered individually to see how well the student could comprehend a story. The teacher read a short story to the students individually, and then asked them to name the following: main character(s), main idea, setting, reality or fantasy, and tell the solution to the problem. Each answer was rated either a three for very good, two for fair, or a one for poor. The students' scores were tallied together under the three categories and a percentage was given for each. A summary of the results on the Teacher Checklist of Reading Skills is presented in Figure 2.



Criteria

1. *Knows upper and lower case letters*
2. *Knows the sound of the letters*
3. *Tries sounding out words*
4. *Knows sight words*
5. *Can read a simple sentence*
6. *Can comprehend a sentence*
7. *Can comprehend a story*

Figure 2

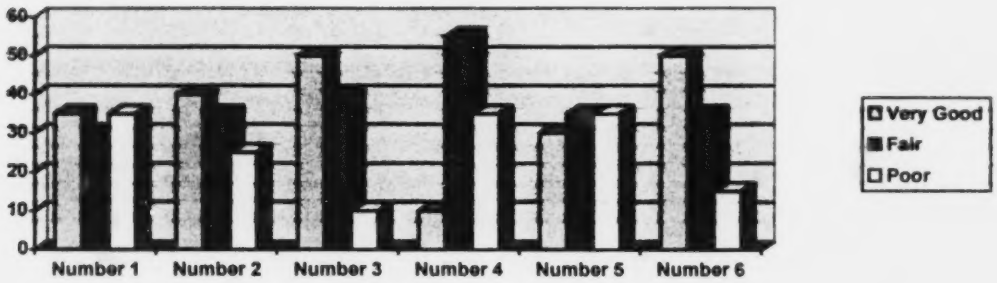
Percentages based on the teacher checklist of reading skills for the targeted first grade class tested for two weeks in January 1999.

The results in Figure 2 documents that students are more likely to have fair or poor reading skills over very good reading skills. A combination of fair and poor equaling 74 percent suggested that students had weak skills in recognizing upper and

lowercase letters. Although, 89 percent of the students knew the sounds of the letters, only 21 percent were very good at reading the sight words. Fewer than 63 percent of the students were able to comprehend a story satisfactorily; only 37 percent did so with success. When it came to reading a simple sentence with comprehension, all the students scored perfectly. It can be inferred that the words were familiar to them because of past exposure during the school year. The rest of the data documented that the first grade students do not have adequate reading skills based on the criteria evaluated in the Teacher Checklist.

The 20 second grade students were evaluated for two weeks based on six criteria on the Teacher Checklist of Reading Skills (see sample in Appendix F). The criteria were divided and scored into three categories: very good, fair and poor. The criteria tested how well the students knew sight words, the comprehension of a sentence, and the comprehension of a paragraph. The students were also tested on how well they could identify the main character, setting, problem, reality or fantasy, and the solution to the problem in a short story. The students were also tested on reading fluency and oral expression while reading aloud to the teacher. The teacher had each student read the sight words individually (see sample in Appendix G). The sight words were scored as follows: 144 to 139 words correct was very good, 138 to 133 words correct was fair and 132 and below correct words was poor. The scores were tallied and the percentage of students in each score class was calculated. To see if the students could comprehend a sentence, the teacher had the students read the sentence aloud. The student had to accurately explain the meaning of the sentence to the teacher to receive very good, otherwise they were given fair if they partially understood the sentence and poor if they

could not make sense of the sentence. The scores were tallied under the categories and a percentage was calculated. To see if the students could comprehend a paragraph, the students were given a paragraph to read on their own along with seven questions to answer about the paragraph. The scoring was as follows: six to seven answers correct, *very good*; four to five answers correct, *fair*; and three or less correct answers, *poor*. The scores were then tallied and a percentage for each category was calculated. To test the comprehension of a short story, the students read a story as a class and were given a worksheet to complete (see sample in Appendix). The scoring was as follows: five answers correct, *very good*; three or four answers correct, *fair*; and two or fewer correct answers, *poor*. The scores were then tallied and a percentage was calculated for each category. To test the students on reading fluently and with expression, the teacher had the students read orally. The teacher then decided if the students read with fluency and expression by using a very good, fair and poor scale. If the students could read this way most of the time they scored very good, part of the time they scored fair, if the student did not read with fluency or rarely used expression, they scored poor. The scores were then tallied and given a percentage. A summary of the results for the Teacher Checklist of Reading Skills is given in Figure 3.



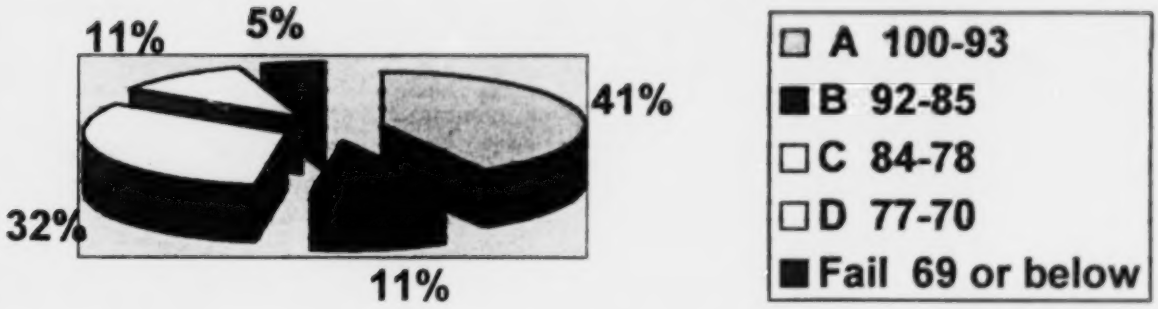
1. *The student knows sight words.*
2. *The student can comprehend a sentence.*
3. *The student can comprehend a paragraph.*
4. *The student can identify items in a short story.*
5. *Student reads with fluency.*
6. *Student reads orally with expression.*

Figure 3

Percentages based on the teacher checklist of reading skills for the targeted second grade class tested for two weeks in January 1999.

It can be inferred that the second grade students need to improve on learning sight words and reading with fluency and comprehending a short story. Ten percent can comprehend a short story with little or no problem. Ninety percent of the students have problems identifying the main character, setting, fantasy or reality, and the solution to the problem in a short story. The students seem to be very good at reading orally with expression. The students seem to need improvement on identifying items in a short story. Fifty percent of the students can comprehend a paragraph with only 10 percent of the students having severe difficulty doing so.

A Reading Comprehension Test was administered to the 19 first grade students all in the same day (see sample in Appendix H). The test consisted of 15 questions that were taken from a short story the students heard earlier that day. The students were read the questions orally on an individual basis and the teacher recorded their exact responses. Two questions on the test needed two answers, so the possible total of correct answers was 17. The tests were graded and a percentage was given based on the E-Z Grader. The scale went as follows: 100 to 93 percent was an A, 92 to 85 percent was a B, 84 to 78 percent was a C, 77 to 70 percent was a D and 69 percent or below was failing. The 19 grades were tallied in each score class and percentages were calculated. The results of the Reading Comprehension Test for the first grade are presented in Figure 4.



Score category	Number of Students	Percent of Students
A 100-93	8	42%
B 92-85	2	11%
C 84-78	6	32%
D 77-70	2	11%
Fail 69 or below	1	5%

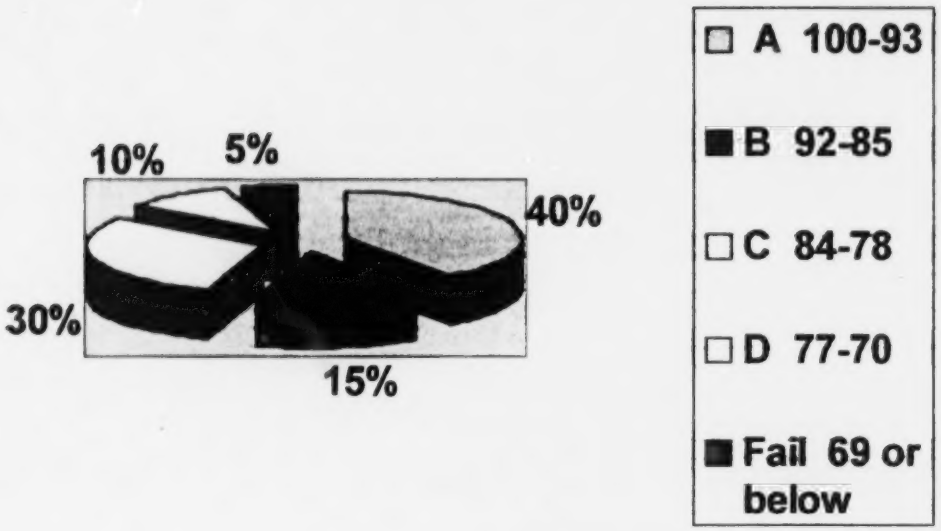
Figure 4

Percentages and score categories of the first grade reading comprehension test administered in January of the 1998-99 school year.

Results of the test show that 85 percent of the students received a letter grade of C or better. Out of those 19 students, 8 received a letter grade of A and 6

students had a grade of C. Only two students received a B and the remaining three scored a D or failed. The 42 percent that passed with an A is still not half of the class. The remaining 59 percent received a B or lower on the test. Overall, there is still a little under half that need to improve their reading comprehension.

A Reading Comprehension Test was administered to 20 second grade students (see sample in the Appendix I). The test consisted of 20 questions that were taken from a story that was read aloud in class. The students completed the test individually. The teacher then graded each test and a percentage was given. The percentages were as follows: 100 to 93 percent was an A, 92 to 85 percent was a B, 84 to 78 percent was a C, 77 to 70 percent was a D, and 69 percent or below was failing. The grades were then tallied for each score class and a percentage was calculated. The results for the Reading Comprehension Test are represented in Figure 5.



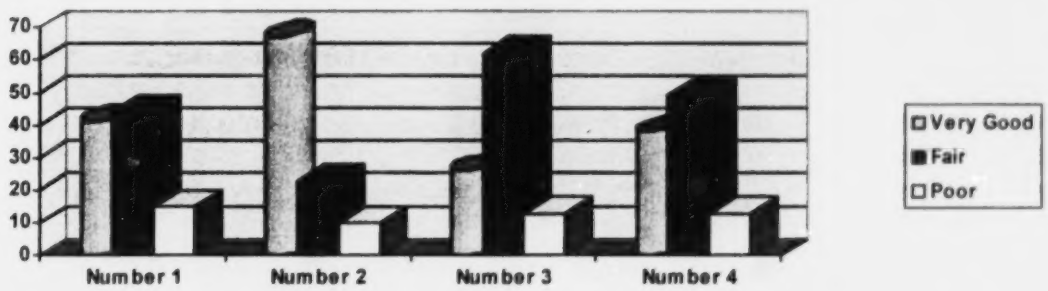
Score Category	Number of Students	Percent of Students
A 100-93	8	40%
B 92-85	3	15%
C 84-78	6	30%
D 77-70	2	10%
Fail 69 or below	1	5%

Figure 5

Percentages and score categories of the second grade reading comprehension test administered in January of the 1998-99 school year.

From figure 5, it can be inferred that 85 percent of the students are doing average to slightly above average work when it comes to reading comprehension. Forty percent of the students score an A on the exam and 15 percent received a D or lower. The highest percent was 30 percent falling in the C level.

Both first and second grade teachers completed a checklist of reading behaviors for each student over a one-week period of time (see sample in Appendix J). The criteria were based on three categories: very good, fair and poor. Each student was observed and ranked for each criterion. All of the first and second grade students' scores were combined and tallied under the categories and a percentage was given to each. The result of the Teacher Checklist for Reading Behaviors is presented in Figure 6.



1. *The student seems interested in reading.*
2. *The student volunteers to read.*
3. *The student selects books appropriate for his/her reading level.*
4. *When asked about a book, the student has read, he/she can give a short summary.*

Figure 6

Percentages of the reading behavior checklist for the targeted first and second grade classes in January 1999.

The results presented in Figure 6 indicates that the first and second grade students enjoy reading, but most are not selecting the appropriate books for their reading level. Almost three-fourths of the students have fair or poor skills when choosing a book that is appropriate for their reading level. About one-third of the students are able to summarize a book they have read. The two-thirds who are fair or poor at this skill have difficulty choosing books that are appropriate for their reading level. Almost 70% of the students volunteer to read, but almost half of the students lack interest in reading.

The overall data infers that more than half the students have fair to poor reading and writing skills. Students that have trouble recognizing sight words struggle to read and comprehend sentences and stories adequately, therefore, writing sentences and stories correctly becomes more difficult. Furthermore, students cannot pick out books appropriate for their grade level and have difficulty summarizing the story. Students will volunteer to read even if they have fair to poor reading skills. The data indicates that most of the first and second grade students are not reading and writing as well as expected for their grade level.

Probable Causes

There are several probable causes for children's inadequate achievement in reading and writing. The possible reasons for the problem can be attributed to the following categories: educational, family issues and the impact of the media on children.

A number of educational issues inhibit a child's achievement in reading and writing. According to Deshon (1997, p.12) "Even the most well intentioned decisions can lead to inequality of opportunity in the classroom." Children needing extra help with reading and writing are at a higher disadvantage if they come from low income families (Deshon, 1997). Willlis' study (as cited in Deshon, 1997, p.15) believes literacy programs "clearly put some children at a disadvantage, while giving an advantage to others" because school literacy is narrowly defined by white middle-class European American culture. Another potential problem is found to be that teachers are not using a variety of strategies that recognize that students have different strengths, different weaknesses, and different reading styles (Carbo, 1997). Instead of focusing on a child's weaknesses, the teacher needs to focus on the child's strengths. In doing this, numerous teaching strategies may be applied (Carbo, 1997). Teaching professionals are not recognizing the importance of multiple teaching strategies (Smith, 1998). "What is food for one may be poison for another" (Carbo, 1997, p.33). A third educational issue is found to be that teachers are not meeting learners' academic needs. Teachers are not selecting material that is interesting to each student so therefore a positive learning experience is not established (Smith, 1992). Teachers

are that not using the multiple intelligence in a classroom may not be enhancing academically challenged students (Chapman, 1993). There are many children in special education because teachers do not know how to trigger their learning process (Lazaer, 1991). "I find myself an advocate for the "giftedness" of every child, if only we as teachers can find the keys to unlock their full potential" (Lazaer, 1991, p.xi). Finally, teachers are not spending enough time focusing on reading and writing in their classrooms (Fielding & Pearson, 1994). Many students enter middle school with poor basic reading skills. Low achievement in reading causes problems for students academically and socially (Showers, Joyce, Scanlon, & Schnaubelt, 1998). According to Allington and Stanovich (as cited in Fielding & Pearson, 1994, p.63) "A never more compelling argument is that the differing amounts of time teachers give students to read texts accounts for the widening gaps between more able and less able readers throughout the school grades."

Family issues is another category of probable causes for students exhibiting inadequate achievement in reading and writing. The children who are most at risk for reading failure come from homes where stimulating literacy experiences from birth onward never took place (Lyon, 1998). Parents that limit their child's choice of books can inhibit their child's interest in reading (Cullinan, 1992). Parents that were never read to as children, do not model reading with their child because the behavior had never been established. There is very little contact between the school and parents of at-risk children (Allington & Cunningham, 1994). According to Hart & Risley, Juel, Snow, et. Al (as cited in Dickinson & DiGisis' study, 1998 p.23) "the process of becoming literate begins early in life and that children's' early experiences affect school readiness in later school success." If children do not see adults modeling reading at home, they

are less likely to read themselves (Cullinan, 1992). If parent-teacher communication is non-existent, a strong foundation for student success in school cannot be achieved (Spaulding, 1994). Furthermore, between lack of communication with parents and teachers inhibit the students' academic standing, social skills, and emotional well-being (Spaulding, 1994).

The final probable cause is the impact that the media has on children. Television and other forms of media portray acts of violence on a regular basis. According to Jason (1997, p.1) "Approximately 25% of children watch from 4 to 11 hours of television daily." With cable or satellite dishes in the homes' children's television shows contain about 20 violent acts each hour. Television has a major impact on children's psychological and physical well being. Children may become less sensitive to pain and exhibit violent behaviors more frequently towards peers, as well as adults. (Jason, 1997). Furthermore, Jason states (1997, p.2) "American children spend an average of 4 hours of television a day, 28 hours per week watching TV; by age 18 they have watched 22,000 hours of TV—more time than they ever spent in the classroom". Because of this, positive family interaction is minimal, social skills are not developed fully, and time spent reading is sacrifice. Another form of media that can be harmful to children is the Internet. The Internet has an impact on children's attitudes and achievement. It has many different sites that can enhance a child's learning, but it is too easy to access sites that contain pornography and violence (Jason, 1997).

Music and video games are other forms of media that can be harmful to children due to the amount of violent content in some of the songs and video games. Excessive amount of time spent listening to music and playing video games inhibits academic growth.

There are many factors that effect a child's achievement in reading and writing. How ever, family and educational issues, as well as the media have a high impact on a child's academic achievement because they come in contact with these issues on a regular basis. It is important for every adult to become aware of these probable causes to ensure academic growth of the children of our world today.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

There are numerous strategies for enhancing academic achievement in reading and writing. These strategies can be incorporated into the following categories: instructional design, techniques, parent-child relationship, and parent-school relationship.

Instructional design focuses on what the teacher is doing to improve reading and writing achievement. Cooperative learning is a strategy that may improve reading and writing skills. Cooperative learning requires students of different gender, race, and academic abilities to be combined into small groups consisting of two to five students to achieve academic learning goals (Bellanca & Robin, 1991). Before the students are placed into the cooperative learning groups, students are aware of their roles and responsibilities for being positive group members. The groups are a given a project where the students must work together to complete the activity. "At it's best, cooperative learning has positive social and cognitive benefits for students of all abilities" (Fielding & Pearson, 1994, p.65).

Every child can learn, but their learning can be enhanced by using the theory of multiple intelligences. There are eight intelligences. The verbal/linguistic intelligence focuses on language. The musical/rhythmic intelligence concentrates on music and it's elements. The logical/mathematical intelligence combines math with science exploration. The visual/spatial intelligence is the ability to visualize objects with understanding. Bodily/kinesthetic intelligence uses physical movement to enhance learning. The naturalist intelligence involves the understanding of one's surroundings based on a scientific approach. Intrapersonal intelligence is

the understanding of one's emotions combined with the ability to self reflect. The interpersonal intelligence enables a person to understand and communicate with others (Chapman, 1993). Incorporating multiple intelligences into the curriculum may increase a student's academic ability (Lazear, 1991).

Peer and cross age tutoring are two other instructional strategies. Both revolve around students helping students, the only difference is the age factor. Peer tutoring involves students working together in the same grade, while cross-age tutoring is a combination of students in upper grade levels working with students in lower grade levels (Gaustad, 1993).

Reciprocal teaching is another model in which students gradually assume the role of the teacher by leading a class discussion. This reinforces student knowledge of the material that is being taught (Fielding&Pearson, 1994). According to Palinscar et al. (As cited in Fielding & Pearson, 1994, p.65). "reciprocal teaching is effective when students, not just teachers, teach their peers to engage in these dialogues."

Phonics is another method for teaching reading and writing to young students. Phonics is the ability to sound out words. Children that are exposed to phonics at an earlier age are more likely to excel in reading at a faster pace compared to those who have not had phonics instruction (Trachtenburg, 1990). Phonics can be incorporated into any reading and writing lesson.

Whole-language is an instructional design that is child centered and literature based. Students are continuously exposed to textual materials and engaged in conversation (Froese, 1991). When using the whole-language approach, students write by using invented spelling, read for meaning, and are given whole books and poems (Froese, 1991).

There are numerous techniques a teacher may use that contribute to the students' academic growth. Shared reading takes place every time the teacher reads a book to the class (Carbo, 1997). Listening centers and recorded books may be combined as a technique because both of these involve students listening to books that have been recorded onto tapes. This technique may be beneficial for the audio/visual learner (Carbo, 1997). Graphic organizers help students organize information. This entails narrowing a general topic into specific categories. Webs, Venn diagrams, K-W-L charts, story maps, and concept maps are some examples of graphic organizers that may be used in the classroom (Cunningham & Allington, 1994). Incorporating drama into lessons gets the students actively involved in the reading and writing process. Writing, creating, and acting out plays and stories are forms of drama (Cunningham & Allington, 1994). Journals are a technique used for students to express feelings, thoughts, ideas, and experiences. Ongoing communication takes place between the student and teacher within the journal. This technique gives the teacher insight about the student's comprehension of the lesson (Burke, 1994). Writer's workshop consists of a variety of activities. The workshop begins when the teacher reads a story to the class and a discussion follows. The students can work together as a class, in groups, pairs, or individually to engage in the writing process. The students choose a topic and begin writing while the teacher provides assistance. When the product is completed, sharing takes place and positive reinforcement is given (Baker, 1994).

Parents can affect their child's academic achievement in a variety of ways. According to Cullinan (1992, p. 26), "reading aloud establishes bonds of love." Parents who read to their children can enhance their academic achievement. Reading aloud to children allows them to differentiate between spoken and written language (Cullinan, 1992). Parents can positively

reinforce reading and writing by turning their child's environment into an ongoing learning experience (Carden, 1996). Having writing materials in the home may also enhance reading and writing. Parents that monitor what programs and how much television their child watches along with viewing educational programs with their child can enrich the learning experience (Whitfill, 1995). Communication between parents and their children is another way for parents to show interest in their child's academic performance. Trips to the library on a regular basis can get a child excited about reading. Parents who take their children to the library may be setting a positive example about the importance of reading and writing (Cunningham & Allington, 1994). Parents can encourage their child to read and write by modeling these activities themselves (Cullinan, 1992).

The relationship between the school and parents can affect a child's academic achievement. When there is communication between the school and parents, a child may be more likely to succeed in school. There are many ways parents can become involved with their child's learning. Parents can help with art projects, read aloud to their child's class, help with class parties, or volunteer to assist in reading and writing activities. Schools can demonstrate communication to parents by sending weekly newsletters home, calling parents, and visiting the child's home (Cunningham & Allington, 1994). Teachers can create activities that relate to the family environment (Coleman, 1991). By doing this, a teacher can reinforce a positive relationship between the school and home.

There are many ways to improve a child's achievement in reading and writing. Instructional methods combined with the techniques of teaching can stimulate growth in a child's learning process. Parents that have a positive relationship with their child and the school

can set the foundation for their child to be successful in school.

Project Objectives and Processes

As a result of increased emphasis on increased altered instructional techniques during the period of January 1999 to May 1999, the first and second grade students from the targeted classes will increase their academic achievement in reading and writing, as measured by writing samples, observation checklists for reading and writing, and teacher made tests.

In order to accomplish the project objective, the following processes are necessary:

1. A series of cooperative learning activities will be developed for reading and writing.
2. A variety of activities incorporating multiple intelligences will be developed.
3. Lessons incorporating cross-age tutoring will be developed and will be implemented in a variety of lessons.
4. Writing samples, observation checklists, and teacher made tests will be developed.

Project Action Plan

In order to accomplish academic achievement in reading and writing the following strategies need to be implemented:

- Cooperative learning activities combining reading and writing will take place once a week for 45 minutes.
- Multiple intelligences activities will be incorporated into combined reading and writing lessons once a week for 45 minutes.
- Cross-age tutoring will take place between the targeted first and second grade students involving reading and writing every other week for 30 minutes.

I. First Grade Cooperative Learning Lessons. These lessons will take place in groups with the group members assigned roles. They will work together to complete the task.

A. Week one: Solar System Unit.

1. The teacher will read the book Planets and a discussion will follow. The students will work in groups of four and write five facts about the Solar System and draw pictures to represent the facts. Each group will share their facts.
2. The assessment of the lesson will be the facts written by the groups.

B. Week two: Groundhog's Day Unit.

1. The students will work in groups of four and write about the two scenarios of Groundhog's Day and draw pictures to illustrate.
2. The assessment of the lesson will be the scenarios written by the groups.

C. Week three: Valentines' Day Unit.

1. The teacher will display a Valentines poem on chart paper and read it to the class. The class will read a long and repeat it with the teacher. The students will be divided into groups of four to create a Valentine's poem. The groups will share their poem with the class.
2. The assessment will be the poems.

D. Week four: Presidents' Day Unit.

1. The students will work together in groups of four. They will be given a short story about Abraham Lincoln to read together and discuss. They will be given a worksheet and write the answers as a group (see sample lesson in Appendix K).
2. The assessment will be the worksheets.

E. Week five: Nutrition Unit.

1. The students will work in groups of four to make a poster promoting healthy Living. The group will write a slogan on the poster and draw pictures to illustrate. The groups will share their posters with the class.
2. The assessment will be the posters.

F. Week six: Teeth Unit

1. In groups of four, the students will color and read together a mini-book about teeth, given to them by the teacher. They will read it three times and discuss it. They will write four sentences about ways to keep their teeth healthy.
2. The assessment will be the sentences.

G. Week seven: Illinois Unit.

1. The students will work in groups of four and make a "Welcome to Illinois" sign and write four facts about Illinois. Each group will share their sign.and each member will read a fact.
2. The assessment will be the signs and the facts by each group.

H. Week eight: Farm Unit.

1. The students will work in groups of four to make a list of all the things they know associated with a farm. They will read their list to the class and the teacher will make a big list on chart paper. A discussion will follow and they will watch a farm video.
2. The assessment will be their farm lists.

I. Week nine: St. Patrick's Day Unit.

1. The students will listen to the book Leprechauns Never Lie. They will Work in groups of four and write a short story together about what they would do if they found a leprechaun. The stories will be shared.
2. The assessment will be the stories.

J. Week ten: Zoo Animals Unit.

1. The students will work in groups of three and read a zoo hand-out together The groups will discuss what their favorite zoo animal is and why. They will write it and draw a picture. The students will share their pictures and sentences with the class. The teacher will put them into a class book.
2. The assessment will be pictures and sentences.

K. Week eleven: Insects Unit

1. In groups of four, the students will be given the name of an insect to read about and research at home with their family. After two days, the groups will get together to write facts they've learned about their insect and make a web. The webs and facts will be shared with the class.

2. The assessment will be the webs and the facts.

L. Week twelve: Spring Unit.

1. The students will work together in groups of three. They will read a spring poem several times and make a web about spring.
2. The assessment will be the webs.

II. First Grade Multiple Intelligences Lesson. These lessons will integrate the Multiple Intelligences into reading and writing. The students will work individually, with a partner, or in groups.

A. Week one: Solar System Unit.

1. As a class, the students will work together to develop an Acronym for the Planets. They will write it down on paper and work with a partner to practice the Acronym.
2. The assessment will be teacher observation.

B. Week two: Groundhog's Day Unit.

1. Students will work individually to write in their journals. They will write Their prediction whether or not the groundhog sees its shadow and give a reason. They will draw a picture to go with it and then share their answers with the class. The teacher will tally the votes and a discussion will follow.
2. The assessment will be the journal entries.

C. Week three: Valentines' Day Unit.

1. The students will listen to the teacher read the book Arthur's Valentine. They will be divided into groups of four and retell the story. The teacher will assign each group a story line to illustrate. The story line will be written on the poster. When completed, the teacher will put the posters in random order and the class will have to sequence them. They will then copy each story line onto separate pieces of paper to make a book. The pages will be illustrated to match the story line.
2. The assessment will be the posters.

D. Week four: President's Day Unit.

1. Students will work in groups of four to make a sequence chart recalling Abraham Lincoln's life. They will draw a picture for each part and share it with the class.
2. The assessment will be the group sequence charts.

E. Week five: Nutrition Unit

1. Students will work in groups of four and make a web about nutrition. They will share their webs with the class.
2. The assessment will be the webs.

F. Week six: Teeth Unit

1. The students will listen to the song, "This is the Way We Brush Our Teeth" and then sing a long. The students will get into groups of four with copies of the song. They will read it together, sing it together, and make up movements for the verses. They will sing and demonstrate their movements to the class.
2. The assessment will be teacher observation.

G. Week seven: Illinois Unit.

1. Each student will make a concept map about Illinois and then share it with a partner. With their partner, they will put their facts together and make a book about Illinois with illustrations and sentences.
2. The assessment will be the concept maps and books.

H. Week eight: Farm Unit.

1. Students will listen and sing "Old McDonald". The teacher will write the names of the farm animals that the children recall from the song on the chalkboard. In groups of four, one group member will draw a name of a farm animal out of bag and then the groups will write about that particular farm animal. They will share what they wrote with the class.
2. The assessment will be the group writings.

I. Week nine: St. Patrick's Day Unit.

1. The teacher will read a St.Patrick's Day story to the class and each

student will write and illustrate a paper explaining what they would do if they found the pot of gold. Mount the writings on a pot of gold art activity and let the students share with the class.

2. The assessment will be the art project.

J. Week ten: Zoo Animals Unit.

1. Students will read a mini zoo book (provided by the teacher) to each other. Then each student will write and illustrate a paper about their trip to a zoo. They will rotate around the room reading their stories to each other.
2. The assessment will be their stories.

K. Week eleven: Insects Unit.

1. Students will work in their same Cooperative Learning groups. The groups will make a poster representing their insect. It will contain facts and pictures about the insect that they researched. The groups will explain their poster and they will be hung in the classroom.
2. The assessment will be the posters.

L. Week twelve: Spring Unit.

1. As a class, the teacher and students will go on a nature walk to see and hear the signs of spring. They will also gather spring items. Each student will share one item with the class and then all items will be displayed on a table. The students will be divided into groups of three to draw a spring picture. They will share their pictures. As a class, they will develop a spring poem and recite it three times. The students will write their own spring poem using the same format and read them to the class (see sample lesson in Appendix L).
2. The assessment will be their spring poems.

I. Cooperative Learning Lessons for Second Grade

Cooperative learning is where the students will work in groups to accomplish a given task.

A. Week 1: Mr. Popper's Penguins

1. The teacher will read Mr. Popper's Penguins aloud to the class throughout the week. While reading this book, the students will complete reading and writing activities.
2. Students will work together in pairs to complete a noun categories worksheet.
3. The assessment will be the completed worksheet. (See sample in Appendix M)

B. Week 2: Mr. Popper's Penguins

1. The students will work in groups if four to complete poems about penguins. The poems are partially written, the students need to fill in the blanks.
2. The assessment will be the completed poems.

C. Week 3: George Washington

1. The students will work in groups of four to complete a K-W-L chart about George Washington.
2. The assessment will be a comprehension test on George Washington.

D. Week 4: Abraham Lincoln

1. The students will work in groups of four to complete a K-W-L chart on Abraham Lincoln.
2. The assessment will be a comprehension test on Abraham Lincoln.

E. Week 5: Freckle Juice

1. The students will read Freckle Juice as a class over a period of five days. The students will then work in pairs to create a recipe for freckle juice.
2. The assessment will be a presentation of the recipes.

F. Week 6: Freckle Juice

1. The students will be placed in groups of four to complete a story map for Freckle Juice.

2. The assessment will be the completed story map as well as a comprehension test at the end of the unit.

G. Week 7: Weather

1. The students will work together in pairs to write a paragraph about snow, rain, sleet, tornadoes, hurricanes, thunder, lightning, clouds, fog, and the sun. The students may use a variety of sources to gather the information. The students will draw a weather word out of a bag, this will be the item that the pair will gather information about.
2. The assessment will be the completed report along with a presentation to the class.

H. Week 8: Weather

1. The students will work in groups of four to complete a poem about weather.
2. The assessment will be the completed poem.

I. Week 9: Weather

1. The students will work together in pairs to complete a weather experiment. When the experiment is completed, the students will record their data into their weather experiment booklets.
2. The assessment will be the completed weather experiment booklet.

J. Week 10: Illinois

1. The students will work in groups of four to complete a K-W-L chart about Illinois.
2. The assessment will be the completed K-W-L chart.

K. Week 11: Illinois

1. The students will work in groups of four to create a poem about Illinois.
2. The assessment will be the completed poem presented to the class.

L. Week 12: Illinois

1. The students will work in pairs to design a pamphlet about Illinois. The pamphlet is to attract visitors to the state of Illinois. The students will use facts about Illinois to complete the task.
2. The assessment will be the completed pamphlet.

II. Multiple Intelligences Lesson for Second Grade

Multiple intelligences will be integrated into the lessons to enhance the students' learning experiences. The following activities will be completed in groups or individually by the students.

A. Week 1: Mr. Popper's Penguins

1. The students will walk around the classroom like penguins. After they have completed this, the students will write a paragraph telling how it feels to walk like a penguin.
2. The assessment will be the completed paragraph.

B. Week 2: Mr. Popper's Penguins

1. The students will perform Readers' Theater to re-enact Mr. Popper's Penguins.
2. The students will complete a comprehension test about Mr. Popper's Penguins.

C. Week 3: George Washington

1. The students will work in groups of four to create a rap about George Washington.
2. The assessment will be the completed rap.

D. Week 4: Abraham Lincoln

1. The students will work in groups of four to complete a Venn Diagram comparing Abraham Lincoln and George Washington.
2. The assessment will be the completed Venn Diagram and a comprehension test at the end of the unit.

E. Week 5: Freckle Juice

1. The students will write a paragraph about how they would feel if they were Andrew.
2. The assessment will be the completed paragraph.

F. Week 6: Freckle Juice

1. The students will work in pairs to create a poster that will sell their freckle juice.
2. The assessment will be the completed poster.

G. Week 7: Weather

1. The students will walk outside to observe the weather. After the students return to the classroom, they will write a paragraph to describe how they felt and how it looked outside through their eyes.
2. The assessment will be the completed paragraph.

H. Week 8: Weather

1. The students will divide a piece of drawing paper into four sections. The students will then draw what the four seasons look like.
2. The assessment will be the completed drawings.

I. Week 9: Weather

1. The students will sing "Rain, Rain, Go Away", then create a song about rain, snow, sleet, or sunshine. This activity will be completed in pairs of students.
2. The assessment will be the completed song.

J. Week 10: Illinois

1. The students will learn a song about Illinois. This song has important facts about the state of Illinois. (See sample in Appendix N)
2. The assessment will be a worksheet. The students must fill in the blanks by using the facts from the song.

K. Week 11: Illinois

1. The students will write letters to friends or family who live in other states to try to find out information about the different states.
2. The assessment will be at the end of the unit. This will be a comprehension test about Illinois and other states.

L. Week 12: Illinois

1. The students will work in pairs to design a pamphlet about Illinois. This pamphlet is to attract visitors to Illinois. The students will use facts about Illinois to complete the pamphlet.
2. The assessment will be the completed pamphlet.

III. Cross-age Tutoring

Cross-age tutoring will take place between the targeted first and second grade students every other week for 30 minutes.

A. Week 2: Martin Luther King, Jr.

1. First and second grade students will work together in pairs to create an I Have A Dream mobile. The second grade students will assist the first grade students in writing their dreams for the community, country, and world.
2. The assessment of the lesson will be the completed mobile.

B. Week 4: Shared reading and comprehension

1. Students will read a book in pairs and complete a comprehension worksheet about the story.
2. The assessment will be the completed worksheet.

C. Week 6: Writing Young Authors Stories

1. Students will work in pairs. The first grade students will write stories and the second grade students will assist in revising the stories.
2. The assessment will be the completed story.

D. Week 8: Create a farm animal poem

1. The students will work in pairs to create a poem about a farm animal. The students will draw the name of an animal from a bag to write about. The students will then create a poem together about the animal.
2. The assessment will be the completed poem. (See sample in Appendix O)

E. Week 10: Shared reading and comprehension

1. The students will read a story in pairs and complete a comprehension worksheet.
2. The assessment will be the completed comprehension worksheet.

F. Week 12: Illinois song

1. Second grade students will teach the first grade students a song about Illinois. The song teaches important facts about Illinois.
2. The assessment will be a worksheet in which the first grade students will complete about Illinois.

Methods of Assessment

In order to assess the effects of the intervention, appropriate grade level teacher checklists for reading skills and reading behaviors will be developed. In addition, a writing sample will be administered. Criteria for the writing sample will be developed. A reading comprehension test will be given to each student.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to reduce the inadequate achievement in reading and writing by first and second grade students. The implementation of cooperative learning structures, multiple intelligence lessons and cross-age tutoring lessons were selected to effect the desired changes.

Cooperative learning was used in first grade to facilitate reading and writing in small groups. The action plan called for twelve weeks with one lesson per week combining reading and writing for 45 minutes. Due to scheduling, only eleven weeks of implementation took place. The cooperative learning lessons revolved around the units occurring that particular week. Week eleven in the first grade action plan was skipped. Lessons were created that combined reading and writing in order to improve these skills. The groups were established before each lesson. The groups consisted of five groups of four and one group of three. The first cooperative learning lesson involving the Solar System was not as productive as hoped. The groups were off task, too slow, or arguing to some extent. However, the work that was completed was correct. It was revealed from the lesson which students did not work well together. After a brief review about cooperative groups the students were aware of their roles and responsibilities for the next

time. The second cooperative learning lesson was more effective. Sharing of ideas and compromising took place. From then on, the lessons were very effective. The students helped each other read, spell words, and write sentences. Occasionally, there were small arguments amongst group members, but they diminished quickly. The biggest problem perceived during the lesson was groups working too slowly. However, their work to some extent was better than other groups. See sample lessons in Appendix .

Multiple intelligences lessons was another strategy implemented to improve reading and writing skills in the first grade classroom. These lessons also took place once a week for 45 minutes. The lessons revolved around the unit of the week. Week eleven was skipped here as well due to scheduling. During one lesson, both the cooperative learning lesson and multiple intelligences lesson were combined because the students were really into the topic. All eight multiple intelligences were incorporated throughout the eleven weeks. Their work was very good. During one particular lesson the students were taught how to make a web about nutrition. At this point they weren't familiar with a web, but they caught on to the concept rather quickly. When they did a web with their group, the answers were correct and creative. From then on they could be given a topic and they could make a web about it. They really enjoyed the lessons that involved singing. Throughout the eleven weeks of implementation of multiple intelligences lessons, there were major improvements in their reading and writing skills. There wasn't as much struggling with words when reading and writing. The students were reading more fluently and with more accuracy. In their writings, there were less misspelled words and their handwriting in general became neater. More reading and writing took place independently because their self-confidence in those areas was improving. Overall, the

lessons were effective in improving reading and writing skills in first grade. See sample lessons in Appendix.

In the second grade classroom cooperative learning was used to improve achievement in reading and writing. The students had been using cooperative learning since the beginning of the school year so the expectations were well known to the students. Cooperative learning took place once a week for 45 minutes for the twelve weeks. The students were placed in five groups of four to complete the assigned tasks. Once the students were placed in their groups the teacher went over the directions and answered any questions the students may have had. The student activities ranged from completing KWL charts to writing poems about the assigned topics. A sample lesson can be found in Appendix.

Multiple intelligences was used to improve achievement in reading and writing. Multiple intelligences was frequently used in the second grade classroom. The multiple intelligences were integrated into the curriculum once a week for 45 minutes. Due to a change in the class schedule only eleven weeks of multiple intelligences were integrated instead of twelve weeks. Some of the lessons were completed in five groups of four while other activities were completed in pairs or individually. The teacher used a variety of teaching aides to help the students accomplish their tasks. The assignments ranged from acting like penguins to completing a pamphlet about a state. The teacher was available to provide assistance if needed. A sample lesson can be found in Appendix .

Cross-age tutoring was the final strategy implemented to improve reading and writing skills. This consisted of a 30 minute lesson every other week for six weeks. The first grade students were tutored by second graders. The students were paired based on

their academic abilities. The higher second grade students helped the lower first grade students and the remaining students were paired up. Implementing cross-age tutoring was very effective. The second grade students were very helpful. They never gave answers, but they helped the first grade students figure out the answers. The second graders listened to them read and helped them with difficult words. They helped them spell words when they were writing. One particular lesson that was very productive took place when the second graders helped the first graders write a poem. They had the format for first graders to follow. The second graders took on the teacher role. The second grade students clearly explained how to write the poems. The first graders listened attentively to the second graders. There was never any arguing between the first and second grade students. The students always looked forward to working together. Not only did the students reading and writing improve, but also their self-esteem improved. The first grade students became more self-confident with their reading and writing abilities. See sample lesson in Appendix.

Presentation and Analysis of Results

In order to assess the effects of cooperative learning, multiple intelligences, and cross-age tutoring on achievement in reading and writing skills, a writing sample was given to the 39 first and second grade students at the beginning and the end of the intervention (see samples in AppendiciesP&Q). The same criterion were used in May as in January. The first and second grade students' scores were combined and a percentage was given to each score category representing January and May. These data are presented in Figure 7.

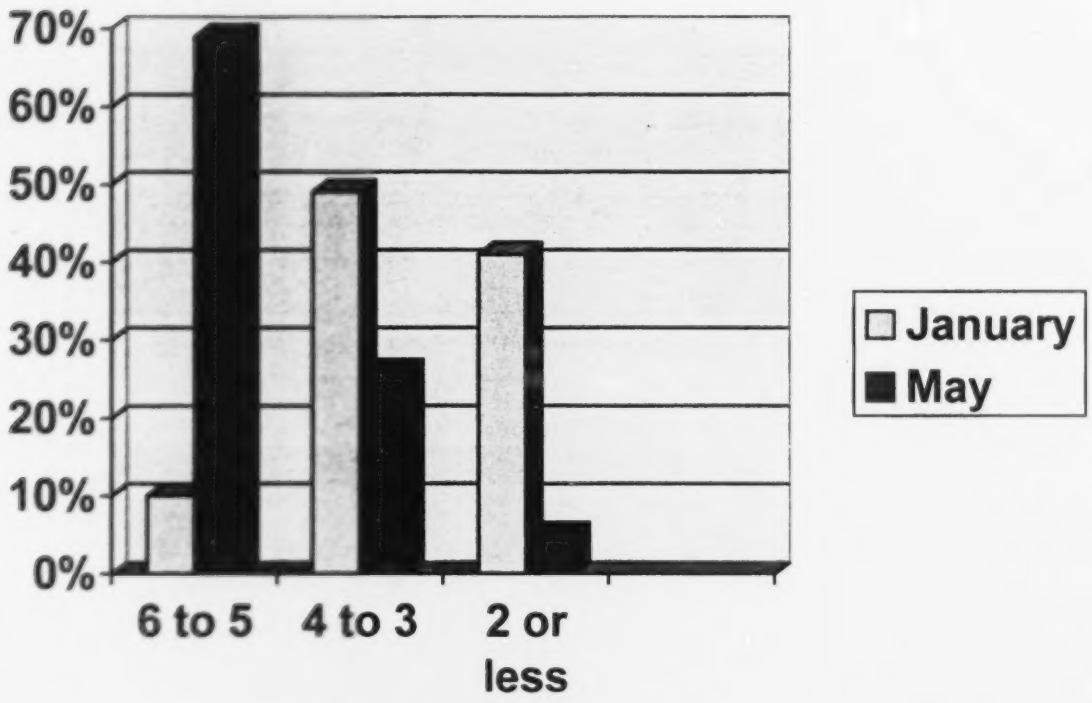


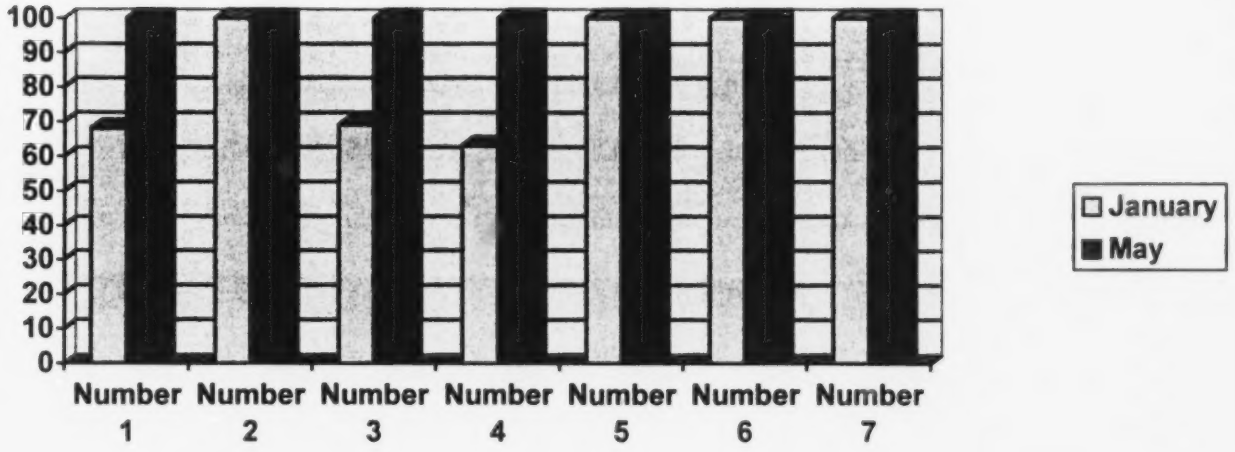
Figure 7

Percentages of first and second grade students with high to low average writing abilities based on writing samples given in January and May.

It can be inferred from the results of the writing sample from January to May that there was a 59% increase in improvement of the first and second grade students in the 6 to 5 category. There was a 23% decrease in the 4 to 3 category as well as a 36% decrease in the 2 or less category for the first and second grade students. From January to May 95% of the students moved to the average or above average category.

The 19 first grade students were tested again for two weeks at the end of May. They were tested based on the same Teacher Checklist of Reading Skills. The criteria

were divided and scored the same way as in January. In order to create the figure to show the results, the percentages of *very good* and *fair* were combined for January and May. The *poor* percentages were eliminated. A comparison of the results on the Teacher Checklist of Reading Skills is presented in Figure 8.



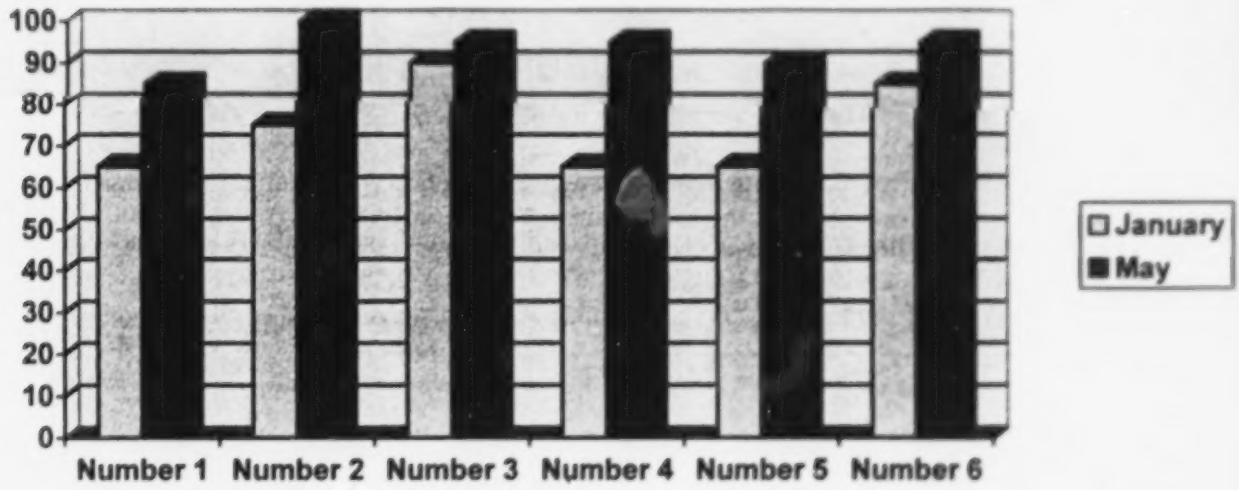
1. Knows upper and lower case letters
2. Knows the sound of letters
3. Tries sounding out words
4. Knows sight words
5. Can read a simple sentence
6. Can comprehend a sentence
7. Can comprehend a sentence

Figure 8

Percentages based on the teacher checklist of reading skills for the targeted first grade class tested for two weeks in May 1999 and compared to the results from January 1999.

The results in Figure 8 clearly document that by May, 100% of the students met the seven criteria. Four of the seven criteria were 100% in January and May when *very good* and *fair* were combined. The three remaining criteria were met by over 50% of the students in January. All 19 first grade students improved by May.

The 20 second grade students were evaluated for two weeks at the end of May. The students were tested based on the same six criterion on the Teacher Checklist of Reading Skills. The criterion were divided and scored the same way as in January. In order to create the figure to show the results, the percentages of *very good* and *fair* were combined for January and May. The *poor* percentages were eliminated. A comparison of the results on the Teacher Checklist of Reading Skills is presented in Figure 9.



1. The student knows sight words.
2. The student can comprehend a sentence.
3. The student can comprehend a paragraph.
4. The student can identify items in a short story.
5. Student reads with fluency.
6. Student reads orally with expression.

Figure 9

Percentages based on the teacher checklist of reading skills for the targeted second grade class tested for two weeks in May 1999 and compared to the two weeks of testing in January 1999.

It can be inferred from the data that all of the students increased in all of the categories for reading skills. The data show that 85% of the students know the sight words. It also shows that 100% of the students can comprehend a sentence; this is a 25% increase from January. That data also show that 95% of the students can comprehend a

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paragraph, identify items in a short story, and read orally with expression. Only 10% of the students exhibit poor skill when it comes to reading with fluency.

A Reading Comprehension Test was administered to the 19 first grade students in May. The test was different from the one given in January (see sample in Appendix R). The test consisted of 10 questions that were taken from a short story. The students read the questions on their own and wrote the answers. The test was graded and a percentage was given based on the E-Z Grader. The same grading scale was used as in January. The 19 grades were tallied in each score class and percentages were calculated. A comparison of the results of the Reading Comprehension Test for January and May is presented in Figure 10.

First Grade Students		
Score Class	**January**	**May**
A 100-93	8	11
B 92-85	2	7
C 84-78	6	1
D 77-70	2	0
F 69 & Below	1	0

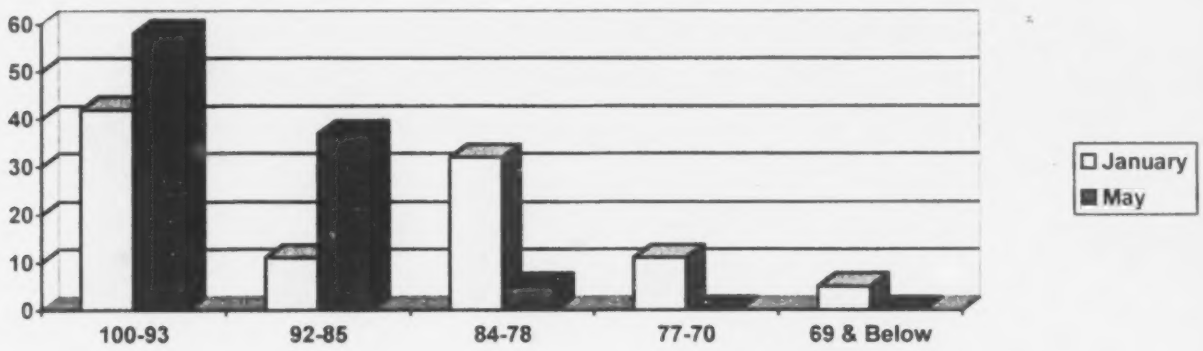

Figure10

Percentages and score categories of the first grade reading comprehension test administered and compared in January and May of the 1998-99 school year.

Results of the tests indicate that in May there were no grades lower than a *C*. More than half or 58% of the students got an *A* in May as compared to only 42% In January. In January 16% of the students had a *D* or lower as compared to 0% in May. The first grade students improved their test scores in May with passing grades of *C* or better.

A Reading Comprehension Test was administered to the 20 second grade students in May. The comprehension test administered in May was different than the one given in January (see sample in Appendix S). The test consisted of 20 questions that were taken from a story read aloud in class. The students completed the test without assistance from the teacher. The tests were graded and a percentage was given based on the E-Z Grader. The same grading scale was used in may as in January. The 20 second grade scores were tallied in each score class and percentages were calculated. A comparison of these results of the Reading Comprehension Test for January and May are presented in Figure 11.

Second Grade Students		
Score Class	**January**	**May**
A 100-93	8	12
B 92-85	3	4
C 84-78	6	2
D 77-70	2	1
F 69 & Below	1	1

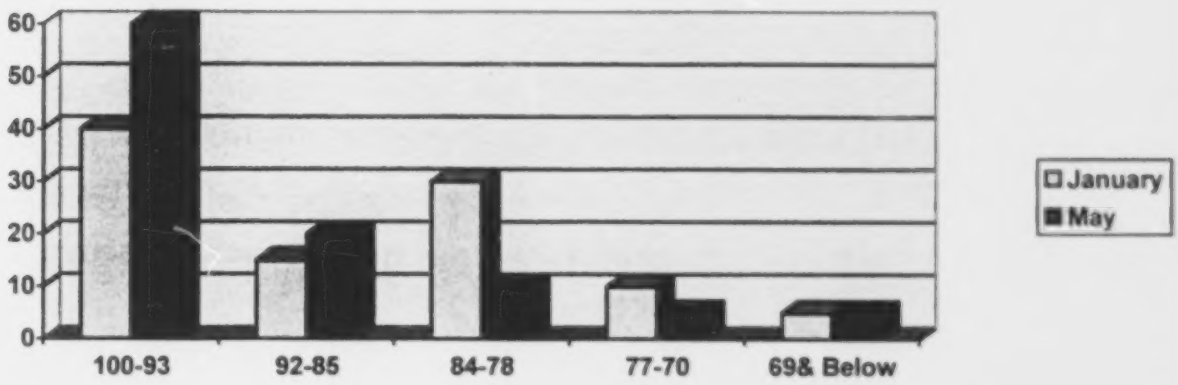

Figure 11

Percentages and score categories of the second grade reading comprehension tests administered in January and May of the 1998-99 school year.

It can be inferred for Figure 11 that 20% more students received *A's* in May than in January. It can also be inferred that there was improvement in all of the score categories except one. The graph shows that in May, 90% of the students were completing reading comprehension at an average to above average level. Only 10% of the students are receiving a *D* or *F* in reading comprehension.

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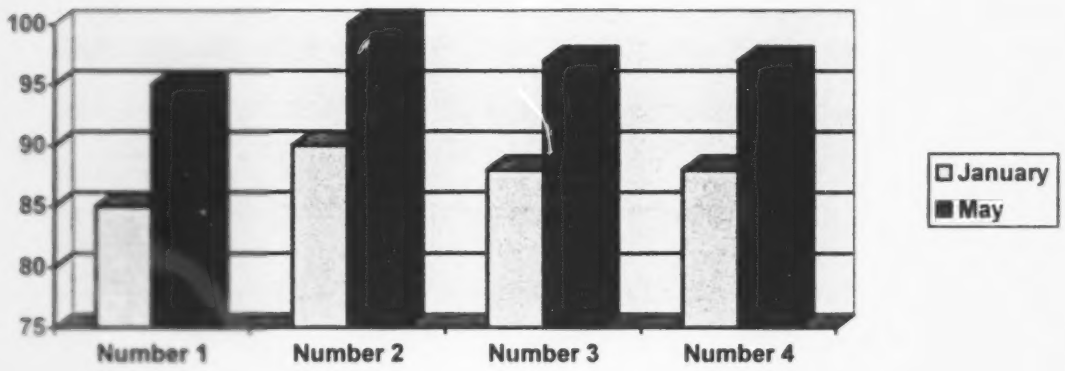
At the end of May, both first and second grade teachers again completed the same checklist of reading behaviors for each student. Each student was observed and ranked for each criterion. All of the first and second grade students' scores were combined and tallied under the categories, and percentages were given. In order to represent a comparison of the data for January and May, *very good* and *fair* percentages were combined and the *poor* percentages were eliminated. The results of the Teacher Checklist for Reading Behaviors in January and May are presented in Figure 12.



1. The student seems interested in reading.
2. The student volunteers to read.
3. The student selects books appropriate for his/her reading level.
4. When asked about a book the student has read, he/she can give a short summary.

Figure 12

Percentages for the reading behavior checklist for the targeted first and second grade classes to be compared in January and May 1999.

It can be inferred from the data that all areas of the reading behavior checklist increased. At least 95% of the students are exhibiting *very good* to *fair* reading behaviors. In January only 85% of the students seemed interested in reading and in May, that figure rose to 95%. From January to May, 100% of the students volunteered to read. Only 3% of the students did not select books appropriate for his/her reading level and were unable to give a short summary about a story.

Conclusion and Recommendations

Based on the presentation and analysis of the data on improving achievement in reading and writing, the students showed a marked improvement in these areas. Cooperative learning aided the students in being successful through peer interaction. Since students learn in a variety of ways, the multiple intelligences lessons catered to the students' ways of learning. Cross-age tutoring played a key role in improving the students' reading and writing skills. The first and second grade students worked very well together. There were very few times the teacher had to step in and offer assistance. The second grade students took on the teacher role when assisting the first graders in various lessons. Self-esteem improved in both grade levels and they looked forward to working together. As a result of cooperative learning, multiple intelligences, and cross-age tutoring, the students' academic achievement in reading and writing improved in all areas.

When implementing this intervention in a classroom, be aware that it is time consuming to prepare for the activities. Cooperative learning will have greater impact if started at the beginning of the year. That way the students are aware of their roles and responsibilities when placed in group activities. Multiple intellligences lessons are

beneficial because they get the students' involved in their learning. Students learn by doing, not sitting, and multiple intelligences enhances the learning process. Cross-age tutoring reinforces what the students have learned because they teach it to other students. The second grade students demonstrated this when teaching the first grade students. The first grade students benefited as well, because they received the help they needed without feeling intimidated or embarrassed. When using cross-age tutoring, the teacher becomes the observer and only gets involved when necessary. Cooperative learning, multiple intelligences, and cross-age tutoring are three great interventions for improving academic achievement in reading and writing.

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APPENDICES

Appendix A

FIRST GRADE WRITING SAMPLE

Name: _____

One day, I was walking to school and I found a lost puppy.

Appendix B
Second Grade Writing Sample - January

Name_____

The day I met the mad scientist in a secret cave _____

Appendix C

CRITERIA FOR WRITING SAMPLE

Student: _____
Grade Level: First_____

CRITERIA	Yes	No
1. The student has sentence variety.	___	___
2. The student wrote at least 5 sentences.	___	___
3. The student used the correct punctuation.	___	___
4. The words are spelled correctly.	___	___
5. The student capitalized the necessary words.	___	___
6. The student put spaces between the words.	___	___

Appendix D
Second Grade Criteria for Writing Sample

	yes	no
The student writes using sentence variety.	____	____
The student composed the paragraph of ten or more complete sentences.	____	____
The student used proper punctuation.	____	____
The student used capital letters where needed.	____	____
The student correctly spelled words.	____	____
The student exhibited correct spacing of words.	____	____

Appendix E

TEACHER CHECKLIST OF READING SKILLS

Student: _____
Grade Level: First_____
Subject: Reading_____

CRITERIA	Very good	Fair	Poor
1. Knows upper and lower case letters	_____	_____	_____
2. Knows the sounds of the letters	_____	_____	_____
3. Tries sounding out words	_____	_____	_____
4. Knows sight words (see Appendix A)	_____	_____	_____
5. Can read a simple sentence	_____	_____	_____
6. Can comprehend a sentence	_____	_____	_____
7. In a short story, the student can			
a. name the main characters	_____	_____	_____
b. state the main idea	_____	_____	_____
c. state the setting	_____	_____	_____
d. state if its fantasy or reality	_____	_____	_____
e. state the solution to the problem	_____	_____	_____
8. Can comprehend the story	_____	_____	_____

Appendix F
Second Grade Checklist of Reading Skills

The student will read a sample paragraph aloud to the teacher.

	frequently	sometimes	not yet
The student knows sight words. (Sight Words - Appendix A)	_____	_____	_____
The student can comprehend a sentence.	_____	_____	_____
The student can comprehend a paragraph.	_____	_____	_____
The student can identify in a paragraph.....	_____	_____	_____
main character			
setting			
problem			
fantasy/reality			
solution to the problem			
Student reads with fluency.	_____	_____	_____
Student reads orally with expression.	_____	_____	_____

Appendix G
Basic Sight Words
Teacher Checklist of Reading Skills
First and Second Grade

a	and	at	big	can	cat
dog	has	I	is	look	me
not	red	run	the		
for	you	did	see	come	here
am	this	will	go	on	what
off	get	it	do		
like	to	up	out	looks	down
put	your	said	with	my	too
can't	went	have	make		
other	came	play	who	all	over
they	he	be	an	as	of
so	us	or	that		
about	his	she	her	one	Mr.
Mrs.	give	we	know	how	saw
are	mother	father	was		
when	had	got	then	them	want
into	same	not	use	ask	were
now	than	been	where		
these	there	those	why	our	once
before	any	away	gave	much	very
ever	does	from	below		
because	please	don't	until	teacher	thank you
left	right	blue	green	brown	black
yellow	white	it's	school		
began	find	talk	yes	never	every
begin	would	should	could	always	goodbye
hello	friend	month	year		

Appendix H

READING COMPREHENSION TEST FOR FIRST GRADE

Name: _____

THE SNOWMAN'S NOSE

1. Who are the main characters in the story?
   _____ _____
2. What season does the story take place? _____
3. What are Jane and her father doing together?
   _____
4. What do they put on the snowman first? _____
5. What do they put on the snowman second? _____
6. What did they want to use for the nose of the snowman? _____
7. Could they find it? Yes or no (circle the answer)
8. Where was it suppose to be? _____
9. What did they find instead of the carrot? _____
10. What animal did they find eating the carrot? _____
11. Where was the animal hiding? _____
12. Why did the animal take the carrot? _____
13. What did Jane bring back from the house? _____
14. Who did she give them to? _____ _____
15. Could this story be real or is it make-believe? _____

Appendix I
Second Grade Reading Comprehension Test - January

Name_____

Freckle Juice by _____

1. The main character is _____.
2. He wants to have _____ because Nicky Lane has them.
3. _____ offers to help him get freckles.
4. Tell how she gets him to try her way.

5. How much did he pay for this recipe? _____
6. Tell the ingredients he used in making this recipe.

7. Did the recipe work? _____
8. What happened to him after he drank the mixture?

9. His mom wanted to take him to the _____ because she thought he had _____.

10. How did she find out what really happened?

11. When Andrew returned to school how did he try to trick Sharon?

12. What did his teacher tell him to do?

13. At the end of the story Andrew found out that Nicky _____ his own freckles and wished _____.

14. What do you think Sharon will try to do next?

15. Which character in the story would you want for a friend? _____

Why? _____

16. Which character in the story would you not want for a friend? _____

Why? _____

Appendix J
Teacher Checklist of Reading Behaviors
First and Second Grade

	very good	fair	poor
The student seems interested in reading.....	____	____	____
follows along while reading the text			
pays attention to what they are reading			
The student volunteers to read?	____	____	____
The student selects books appropriate for his/her reading level.	____	____	____
When asked about a book the student has read, he/she can give a short summary.	____	____	____

Appendix K
First Grade Cooperative Learning Lesson
Abraham Lincoln-President's Day Unit

Objective: In groups, students will read a short story about Abraham Lincoln and fill in the answers on the worksheet together.

Materials:

Cards with one color (red, blue, purple, yellow, green)
Abraham Lincoln story
Abraham Lincoln worksheet (each student gets one)
Pencils

Procedure:

1. Put students in groups of four by having them draw a card with a color on it.
2. Pass out Abraham Lincoln story and groups will read it together three times.
3. Pass out worksheets and the groups will work together to read the questions and write the answers.
4. Students turn in their worksheet when it is completed.

Assessment: Answers on the worksheets.

First Grade Cooperative Learning Lesson
Abraham Lincoln Worksheet

1. Abraham Lincoln lived in a _____.
2. He was our _____ president.
3. How did Abraham Lincoln and his sister get to school? _____.
4. Abraham Lincoln loved to _____.
5. Did everyone love Abraham Lincoln? yes or no
6. Abraham Lincoln freed the _____.
7. Did Abraham Lincoln get married? yes or no
8. How many kids did they have? _____.
9. Abraham Lincoln led the war between the _____ and the _____.
10. How did President Lincoln die? _____.

Appendix L
First Grade Multiple Intelligences Lesson
Nature Walk – Spring Unit

Targeted Intelligences: Intrapersonal, Interpersonal, Naturalist, Visual, Verbal

Objective: Students will listen and look for the signs of spring. They will draw a group picture and write their own spring poem.

Materials:

Brown paper sack (one for each student)
Table
Poster board (one per group)
Crayons/markers
Chalkboard
Chalk
Worksheet with poem format

Procedure:

1. Go on a nature walk a couple blocks around the school.
2. Students will listen and look for the signs of spring.
3. Each student will collect items that represent spring.
4. In the classroom, let each student share one spring item to be placed on the table.
5. Divide the students into groups of three by counting off (1,2,3,1,2,3,etc.).
6. As a group, they will draw and color a spring picture to share with the class.
7. As a class, write a spring poem on the chalkboard using the same format the students will use.
8. Pass out the poem format and have each student write their own and read it to the class.

Assessment: Group pictures and individual poems.

First Grade Spring Poem Format

_____

_____ _____

_____ _____ _____

_____ _____ _____ _____

_____ _____ _____

_____ _____

_____

Appendix M
Second Grade Cooperative Learning Lesson

Objective: The students will work in pairs to complete a noun worksheet using Mr. Popper's Penguins.

Materials: book - Mr. Popper's Penguins
pencils
noun worksheet

Procedure: As a class the students will have read Mr. Popper's Penguins. The students have also reviewed nouns (people, places, and things). The students will work in pairs to complete the noun worksheet.

Assessment: The completed worksheet will be the assessment.

Name_____

Directions: Use your book Mr. Popper's Penguins to complete the sheet. All of the words you write must be nouns.

Places	**Things**	**People**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Appendix N
Second Grade Multiple Intelligences Lesson

Targeted Intelligences: Musical/Rhythmic, Interpersonal

Objective: The students will work as a group to learn a song about the state of Illinois. The students will learn important facts about the state by learning the song.

Materials: copy of the Illinois song

Procedure: The students will be given a copy of the Illinois song. The teacher will sing a verse or two of the song so the students can hear the tune. The teacher will then pick four students to be the leaders of the song. The students will sing the song one or two times a day. A different group will lead the song every time. Every student will have a chance to lead the song. In a week or two the students will have the song memorized.

Assessment: A worksheet will be completed by the students using the facts learned in the song.

Illinois, Illinois
Is our state, is our state
Springfield is our capital, Springfield is our capital
Isn't that great, isn't that great

Illinois, Illinois
Is our state, is our state
The cardinal is our bird, the cardinal is our bird
Isn't that great, isn't that great

Illinois, Illinois
Is our state, is our state
The White Oak is our tree, the White Oak is our tree
Isn't that great, isn't that great

Illinois, Illinois
Is our state, is our state
The violet is our flower, the violet is our flower
Isn't that great, isn't that great

Illinois, Illinois
Is our state, is our state
Our animal is the deer, the White-Tailed deer
Isn't that great, isn't that great

Now our song is done, wasn't that fun
Aren't we great, aren't we great!!!!

Appendix O
Cross-age Tutoring Lesson

Objective: The students will be able to write a poem about a farm animal.

Materials: strips of paper with names of different farm animals on each one
pencils
poem format

Procedure: The first grade students will each get a second grade partner. The second grade student will draw a strip of paper from a bowl. This strip of paper will tell the pair which farm animal they are going to write their poem about. The students will then work together to complete the poem.

Assessment: The assessment will be the completed poem that the first grade student reads.

Appendix P
First Grade Writing Sample for May

Once upon a time _____

Appendix Q
Second Grade Writing Sample - May

Name_____

The day I met a creature from outer space at the beach _____

Appendix R
First Grade Reading Comprehension Test for May

STONE SOUP

1. How many travelers are in the story? _____

2. What two things did the travelers need?
   _____ and _____

3. What did the people say happened to all their food? _____

4. What kind of food did the travelers say they could food? _____

5. How many stones are in the soup? _____

6. What vegetable was put in the soup first?
   _____

7. What vegetable was put in the soup second?
   _____

8. What else was put in the soup? (name everything)
   _____

9. What important likes meat in their soup?
   _____

10. What did the travelers need after they ate? _____

Appendix S
Second Grade Reading Comprehension Test - May

Name_____

The Littles by _____.

1. Who are the Littles? _____
2. Where do they live? _____
3. How many Littles are there living in the Biggs' house? _____
4. What is the name of Lucy Littles' brother? _____
5. The tallest Little is _____.
6. How tall is he? _____
7. The Littles look like other people except, they have _____.
8. Who is Henry Bigg? _____
9. When the Biggs' went on vacation who moved into their house? _____
10. The Littles were afraid of _____. Why? _____

_____

11. How di the Littles get their food? _____
12. Do the Biggs know the Littles live in their house? _____
13. Mr. Little and Tom had to fight a _____.
14. The Newcombs got a cat to chase away all of the _____.

15. Did the Littles get along with the cat? Tell why or why not. _____

16. At the end of the story _____ was riding on the _____ back.

17. Tom and the cat were _____ forever.

18. How did Tom and the cat become friends? _____

_____

19. Would you like to be a Little? Tell why or why not. _____

_____